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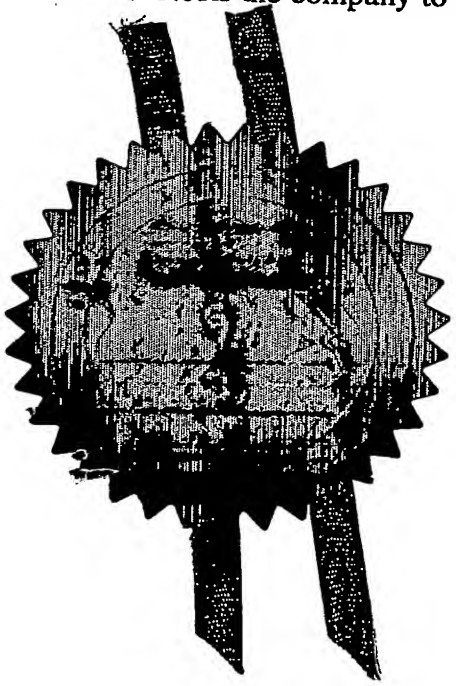

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Dated 14 January 2004

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F01/7700 0.00-0300631.9

Request for grant of a patent

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10 JAN 2003
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1/77

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Cardiff Road
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1. Your reference — IMG/43106GB1

2. Patent application number — 0300631.9

3. Full name, address and post code of the or each applicant — George Docker
8 Parthenia Road
London SW6 4BD

Patents ADP number — 8541591001

If the applicant is a corporate body, give the country/state of its incorporation — United Kingdom

4. Title of the invention — Trouser Press/Ironing Board

5. Name of your agent — VENNER, SHIPLEY & CO

"Address for service" in the United Kingdom to which all correspondence should be sent — 20 LITTLE BRITAIN
LONDON
EC1A 7DH

Patents ADP — 1669004

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or each of these earlier applications and the or each application number

Country	Priority application number	Date of filing

7. If this application is divided or otherwise derived from an earlier UK application, give the number and filing date of the earlier application

Number of earlier application	Date of Filing

Patents Form 1/77

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? *(Answer 'YES' if:*
a) any applicant in 3. above is not an inventor, or
b) there is an inventor who is not named as an applicant, or
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NO

9. Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document

Continuation sheets of this form	
Description	6
Claim(s)	3 DM
Abstract	
Drawing(s)	~~3~~ 3

10. If you are also filing any of the following state how many against each item.

Priority documents	
Translations of priority documents	
Statement of inventorship and right to grant of a patent *(Patents Form 7/77)*	
Request for preliminary examination and search *(Patents Form 9/77)*	1
Request for substantive examination *(Patents Form 10/77)*	
Any other documents	

11. I/We request the grant of a patent on the basis of this application.

Signature: Venner Shipley & Co.

Date: 10 January 2003

12. Name and daytime telephone number of person to contact in the United Kingdom

Ian Grey
020 7600 4212

Trouser Press/Ironing Board

This invention relates to an apparatus or assembly which can be used as a trouser press but is capable of conversion for use as an ironing board.

Trouser presses in which a pair of trousers can be sandwiched and clamped between a heated pad and a pressure plate are known. Ironing boards on which garments can be ironed are also known. However, this requires two separate pieces of equipment so there is a need for an apparatus which combines both of these functions into a single assembly.

According to the invention therefore, there is provided a combined trouser press and ironing board assembly comprising a heatable pad against which a surface of a pressure plate is clampable in a first position to sandwich a garment to be pressed therebetween, wherein the pressure plate is mounted by means which allow said plate to be moved relative to the heatable pad into a second ironing position in which the pressure plate extends laterally outwardly relative to the heatable pad and the surface thereof which was facing the heatable pad in said first position now provides the surface on which a garment can be placed for ironing.

Preferably, the assembly includes a body housing the heatable pad and the pressure plate, one end of said pressure plate being pivotally attached to the body whereby said plate can pivot about said one end towards and away from the heatable pad when the pressure plate is in said first position. In the preferred embodiment, guide means are provided which allow said one end of the pressure plate to slide along opposite side edges of the heatable pad so that the pressure plate can be moved into said second ironing position. Conveniently, the guide means comprise a slot along each side edge of the heatable pad.

Preferably, a support leg extends between the pressure plate and the body to support the pressure plate in said second ironing position. Conveniently, one end of said leg is pivotally attached to the body adjacent the base thereof, the opposite

end of said leg being mounted on the pressure plate so as to be longitudinally slidable therealong.

A secondary stay is preferably pivotally attached at one end to the support leg intermediate the opposite ends thereof, the other end having a foot thereon, the secondary stay being received in a recess in the support leg and retained therein by a releasable catch. The pressure plate is preferably hollow with apertures in the surface on which garments are to be ironed, the hollow pressure plate communicating with extractor means housed in the body operable to draw steam generated during ironing away from the pressure plate.

Conveniently, the extractor means comprises a fan connected by ducting to the hollow interior of the pressure plate when said plate is in its second ironing position, the extractor means including a condenser unit to remove liquid from steam drawn out of the pressure plate by the extractor fan. Preferably, a water reservoir is housed within the body to collect condensate from the condenser unit.

Preferably, a pressurised steam boiler is housed within the body, said boiler being connected to a steam outlet to which a steam iron or brush can be connected. In the preferred embodiment, a duct connects the boiler with the water reservoir so that water can be fed thereto.

Preferably, the body has a pair of wheels rotatably mounted thereon. However, the assembly can also or alternatively include means for permanently mounting it on a vertical surface such as a wall.

A preferred embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a front perspective view of a combined trouser press and ironing board of the present invention in its closed position;

Figure 2 is a rear view of the assembly shown in Figure 1;

Figure 3 shows the assembly of Figure 1 in a first configuration for use as a trouser press;

Figure 4 shows the assembly of Figures 1-3 in a second configuration for use as an ironing board; and

Figure 5 is a schematic cross sectional view of the assembly shown in Figures 1-4.

Referring to the drawings, there is shown a combined trouser press and ironing board apparatus/assembly which comprises a moulded plastics body 1 having a top portion formed into a carrying handle 2. An iron 3 is stored in a cavity 2a formed in the top portion of the body 1.

The front of the assembly includes a pressure plate 4 which is hingedly attached at its base to the body 1 by means of a hinge assembly so that the pressure plate 4 can be pivoted outwardly away from the body 1 to provide access to heatable pad 14 as shown in Figure 3. This allows a pair of trousers to be inserted between the pressure plate 4 and the heatable pad 14 so that the assembly can be used as a trouser press in this first configuration.

A stay 9 on one side of the body 1 limits pivotal movement of the pressure plate 4 away from the pad 14 and a pair of catches 8 on either side of the body 1 retain the pressure plate 4 in its closed position shown in Figure 1.

A support leg 6 is mounted to the outside of the pressure plate 4 and includes a stay 6 pivotally attached thereto at 5b. Referring to Figure 5, it can be seen that the bottom of leg 6 is attached at its base to the body 1 by means of pivot 6a and to the underside of the pressure plate 4 by means of a captive pin 6c slidably retained in a slot 4d extending along a part of the length of the pressure plate 4. The stay 5 has a stabiliser foot 5a pivotally attached to one end thereof, the opposite end being pivotally attached at 5b to the leg 6. The stay 5 is normally spring biased into its open position shown in Figure 5 by spring means (not shown) and is retained in its closed position in a recess in the pressure plate 14 by means of a catch (not shown) releasable when button 11 at the distal end of said plate is depressed.

The free end of the pressure plate 14 has a handle 10 formed thereon on which the release button 11 for leg 6 is located.

A pair of wheels 7 are rotatably mounted to the base of the body to render the assembly mobile.

It will be noted from Figure 5 that a novel feature of the assembly of the invention is the way in which the pressure plate 4 can be moved from its first trouser pressing position shown in Figures 1 and 3 to its second ironing position shown in Figure 5. This is achieved by mounting the end of the plate 4 which is attached to the bottom of the body 1 to be slidably movable up the body until it reaches the position shown in Figures 4 and 5 where it extends laterally outwardly from the body 1 generally normal thereto. Plate 4 has a pair of pins (not shown) which extend laterally from each side of its base and are captively mounted to slide in a slot 15 extending along either side edge of the plate 4 (see Figure 3).

To convert the assembly from its trouser press mode shown in Figure 3 to its ironing mode shown in Figures 4 and 5, the user would release the stay 9 from its position shown in Figure 3 and then pull the handle 10 horizontally outwardly and upwardly. This would cause the hinge pins at the base of the plate 4 to slide upwardly in the slots 15 in the direction of arrow A thereby allowing the plate 4 to move upwardly and outwardly until the hinge pins reach the top end of the slots 15. The plate 4 would then be in its horizontal position shown in Figures 4 and 5 ready to be used as an ironing board.

Other important features of the preferred trouser press/ironing board assembly shown in the drawings will now be described with reference to Figure 5. First of all, it should be noted that the pressure plate 4 which also provides the ironing board has a hollow interior 25 and its top surface 4a has a series of holes 4e formed therein for reasons which will be explained hereafter.

The body 1 houses a condenser 22 connected by a duct 22a to an inlet port 22b located at the top of the body 1 opposite the base of the pressure plate 4 when it is

in its raised ironing position. A water outlet duct 22c extends from the bottom of the condenser 22 and discharges condensate into a reservoir 20 located beneath it in the base of the body 1. The condenser 22 has an air outlet 13 with a fan 23 mounted therein.

Steam iron 3 is connected by flexible tube 21b to steam boiler 21 mounted in the body 1, the steam boiler drawing water from reservoir 20 via inlet duct 21a. The boiler 21 has an electrical heater (not shown) of known type therein. Electrical power to the assembly and the various electrical components therein is provided by retractable power cable 12 located in the base thereof.

The heatable pad 14 is of known type and comprises a planar surface with heating elements therein so no further description thereof will be given here.

The operation of the combined trouser press and ironing board assembly just described is as follows. If the assembly is to be used as a trouser press, the user will release the side catches 8 and pivot the pressure plate 4 outwardly about the bottom thereof into the position shown in Figure 3. The stay 9 would then be lowered into position to restrict further outward pivotal movement. The user can then insert the garment to be pressed (usually a pair of trousers) into the assembly between the heatable pad 14 and the pressure plate 4. The pressure plate 4 is then pivoted towards the heatable pad 4 until it reaches its trouser pressing position shown in Figure 1 and the side catches 8 are then re-engaged to retain the plate 4 firmly against the pad 14 and sandwich the garment therebetween. A switch on control panel 24 can then be activated to switch on the heaters in the pad 4, said heaters being thermostatically and time controlled and including a safety cut-out in known manner. Once the trouser pressing phase is complete after a preselected time, the heaters are automatically switched off and a light on the control panel 24 illuminates to show that the cycle is complete. Alternatively, an audio signal such as a buzzer can be used. The user then releases the side catches 8 and pulls the pressure plate 4 outwardly using the handle 10, pivotal outward movement being limited by the stay 9. The pressed garment can then be removed.

If the user now wants to iron a garment, the stay 9 needs to be released from engagement with plate 14 and the user then pulls outwardly and upwardly on the handle 10 at its distal end thereby causing the base of the pressure plate 4 to slide upwardly in the slots 15 on either side of the heatable pad 14 until it reaches the position shown in Figure 4. At the same time, the leg 6 will pivot outwardly in the direction of arrow B and pin 6c will slide along slot 4a in the underside of the plate 4 away from the handle 10 and towards the body 1 until it reaches the position shown in Figures 4 and 5 where it supports the plate 4 in a horizontal position. Pressing the button 11 then allows the stay 5 to spring out from the leg 6 and assume its position shown in Figures 4 and 5.

It should be noted that surface 4a of the pressure plate 4 which was originally facing the heatable pad 14 is now the top surface of the pressure plate and therefore the surface on which ironing can take place.

In use, garments to be ironed are placed on the top surface 4a of the pressure plate 4 and pressed using steam iron 3 which is supplied with steam from the boiler 21. Any steam which passes through the garment enters the cavity 25 inside the pressure plate 4 through the holes 4c and is drawn by fan 23 through the inlet 22b and duct 22a into the condenser 22 where condensate is removed and fed by pipe 22a into reservoir 20. Air free of water vapour exits the body 1 via outlet 13.

Claims

1. A combined trouser press and ironing board assembly comprising a heatable pad against which a surface of a pressure plate is clampable in a first position to sandwich a garment to be pressed therebetween, wherein the pressure plate is mounted by means which allow said plate to be moved relative to the heatable pad into a second ironing position in which the pressure plate extends laterally outwardly relative to the heatable pad and the surface thereof which was facing the heatable pad is said first position now provides the surface on which a garment can be placed for ironing.

2. An assembly as claimed in claim 1 wherein the assembly includes a body housing the heatable pad and the pressure plate, one end of said pressure plate being pivotally attached to the body whereby said plate can pivot about said one end towards and away from the heatable pad when the pressure plate is in said first position.

3. An assembly as claimed in claim 2 comprising guide means which allow said one end of the pressure plate to slide along opposite side edges of the heatable pad so that the pressure plate can be moved into said second ironing position.

4. An assembly as claimed in claim 3 wherein said guide means comprises a slot along each side edge of the heatable pad.

5. An assembly as claimed in any of claims 2-4 wherein a support leg extends between the pressure plate and the body to support the pressure plate in said second ironing position.

6. An assembly as claimed in claim 5 wherein one end of said leg is pivotally attached to the body adjacent the base thereof, the opposite end of said leg being slidably mounted in the underside of the pressure plate to be longitudinally slidable therealong.

7. An assembly as claimed in claim 5 or claim 6 wherein a secondary stay is pivotally attached at one end to the support leg intermediate the opposite ends thereof, the other end having a foot thereon.

8. An assembly as claimed in claim 7 wherein said secondary stay is received in a recess in the support leg and retained therein by a releasable catch.

9. An assembly as claimed in any preceding claim wherein the pressure plate is hollow and in the surface on which garments are to be ironed has a plurality of apertures therein.

10. An assembly as claimed in claim 9 wherein the hollow pressure plate communicates with extractor means housed in the body operable to draw steam generated during ironing from the hollow interior of the pressure plate.

11. An assembly as claimed in claim 10 wherein the extractor means comprises a fan connected by ducting to the hollow interior of the pressure plate when said plate is in its secondary ironing position.

12. An assembly as claimed in claim 11 wherein the extractor means include a condenser unit to remove liquid from steam drawn out of the pressure plate by the extractor fan.

13. An assembly as claimed in claim 12 wherein a water reservoir is housed within the body to collect condensate from the condenser unit.

14. An assembly as claimed in any of claims 2-13 wherein a pressurised steam boiler is housed within the body, said boiler being connected to a steam outlet to which a steam iron or brush can be connected.

15. An assembly as claimed in claim 14 wherein a duct connects the water reservoir with the boiler.

16. An assembly as claimed in any of claims 2-15 wherein the body has a pair of wheels rotatably mounted thereon.

17. An assembly as claimed in any of claims 2-16 wherein a retractable power cable is housed in the body.

FIG 1

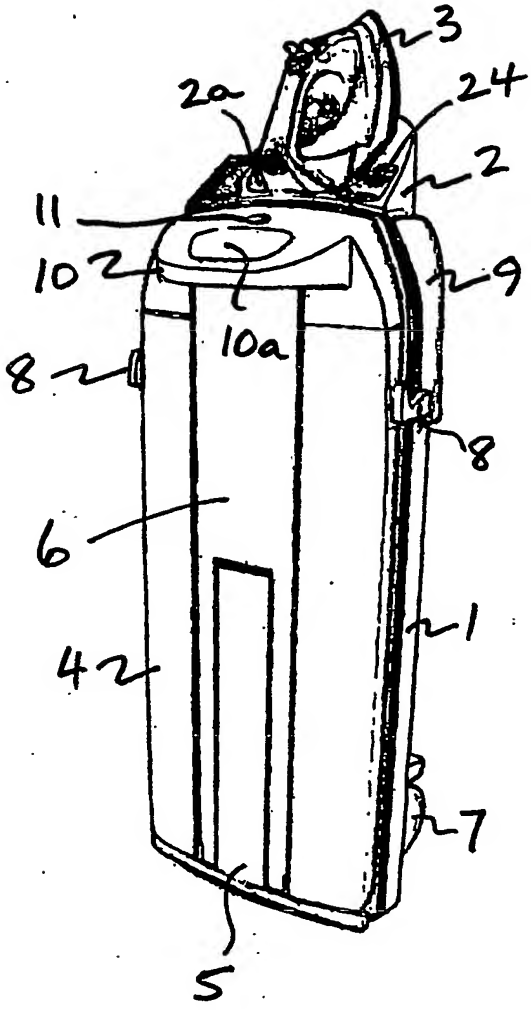
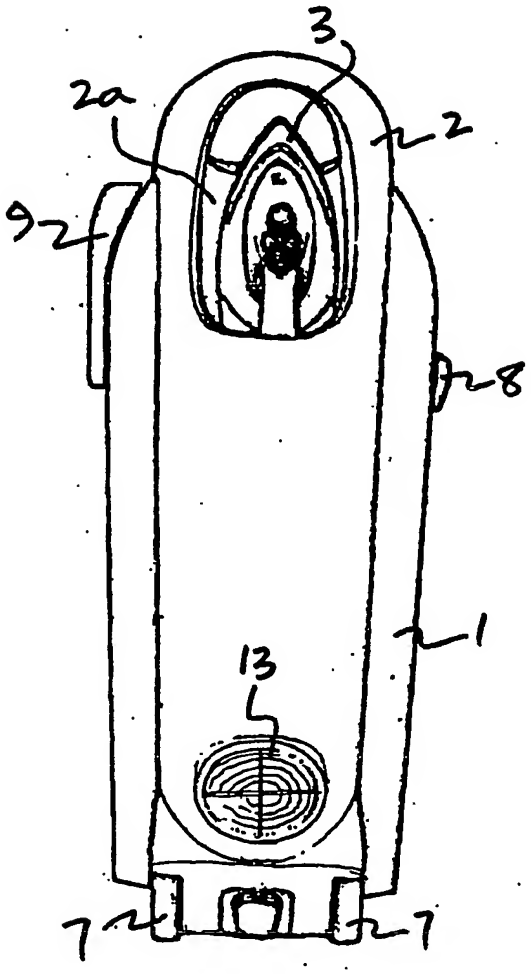


FIG 2



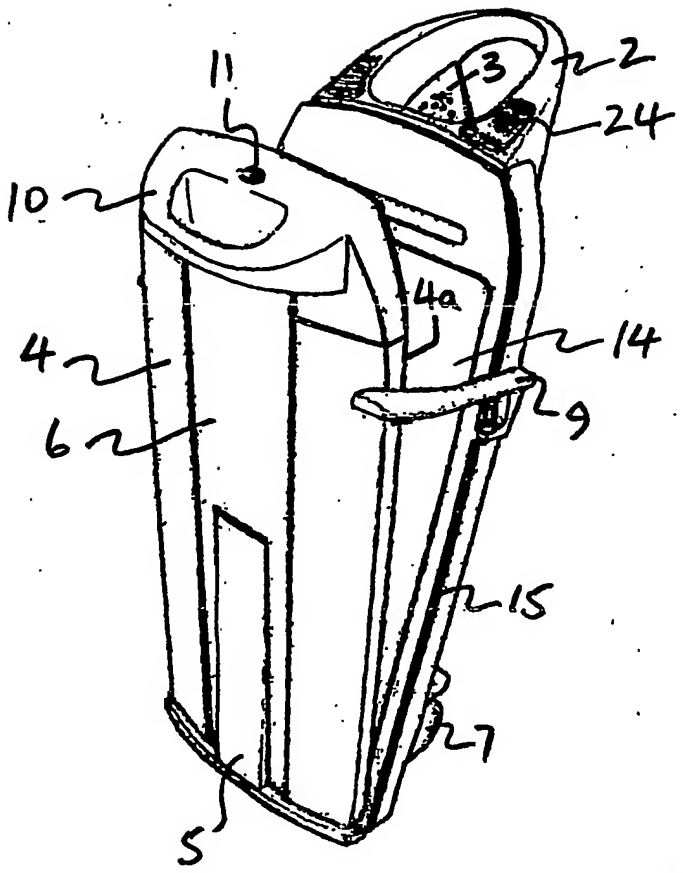


FIG3

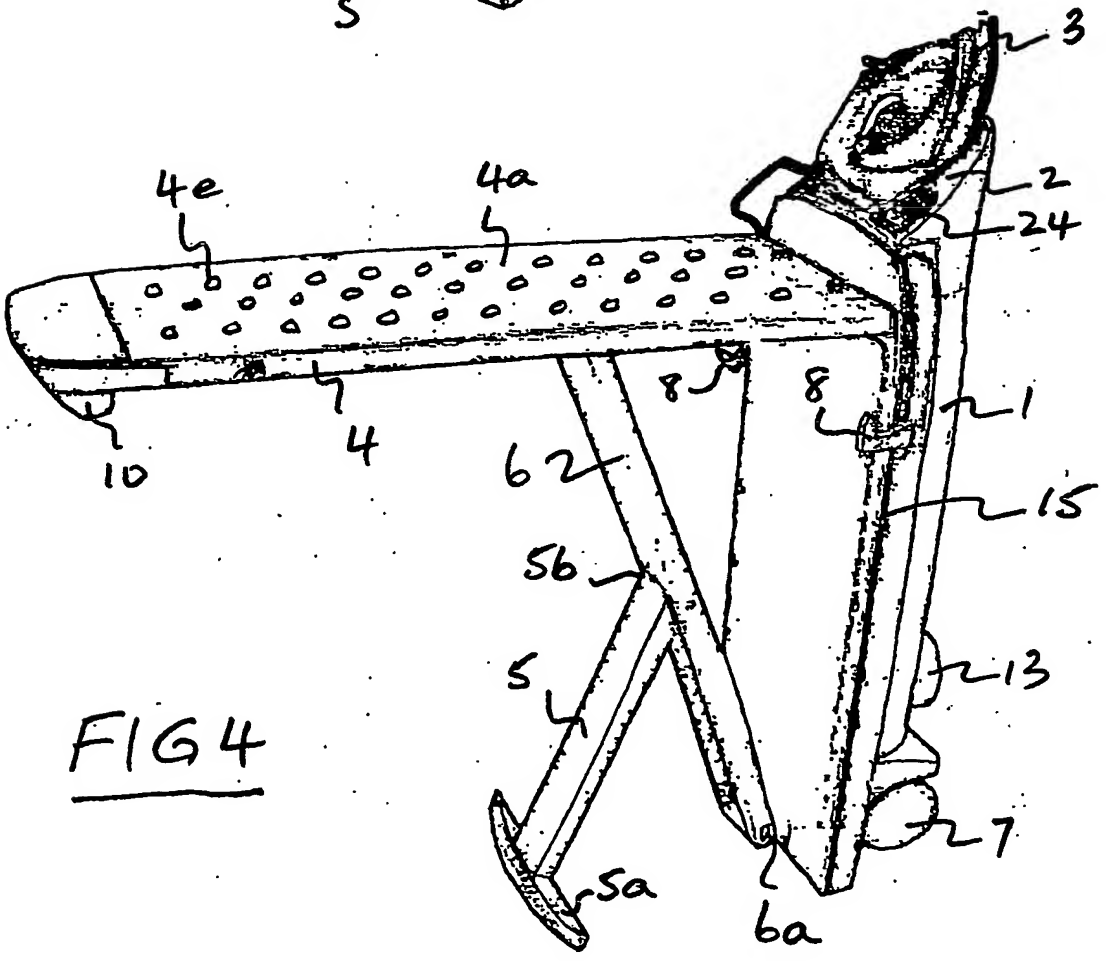
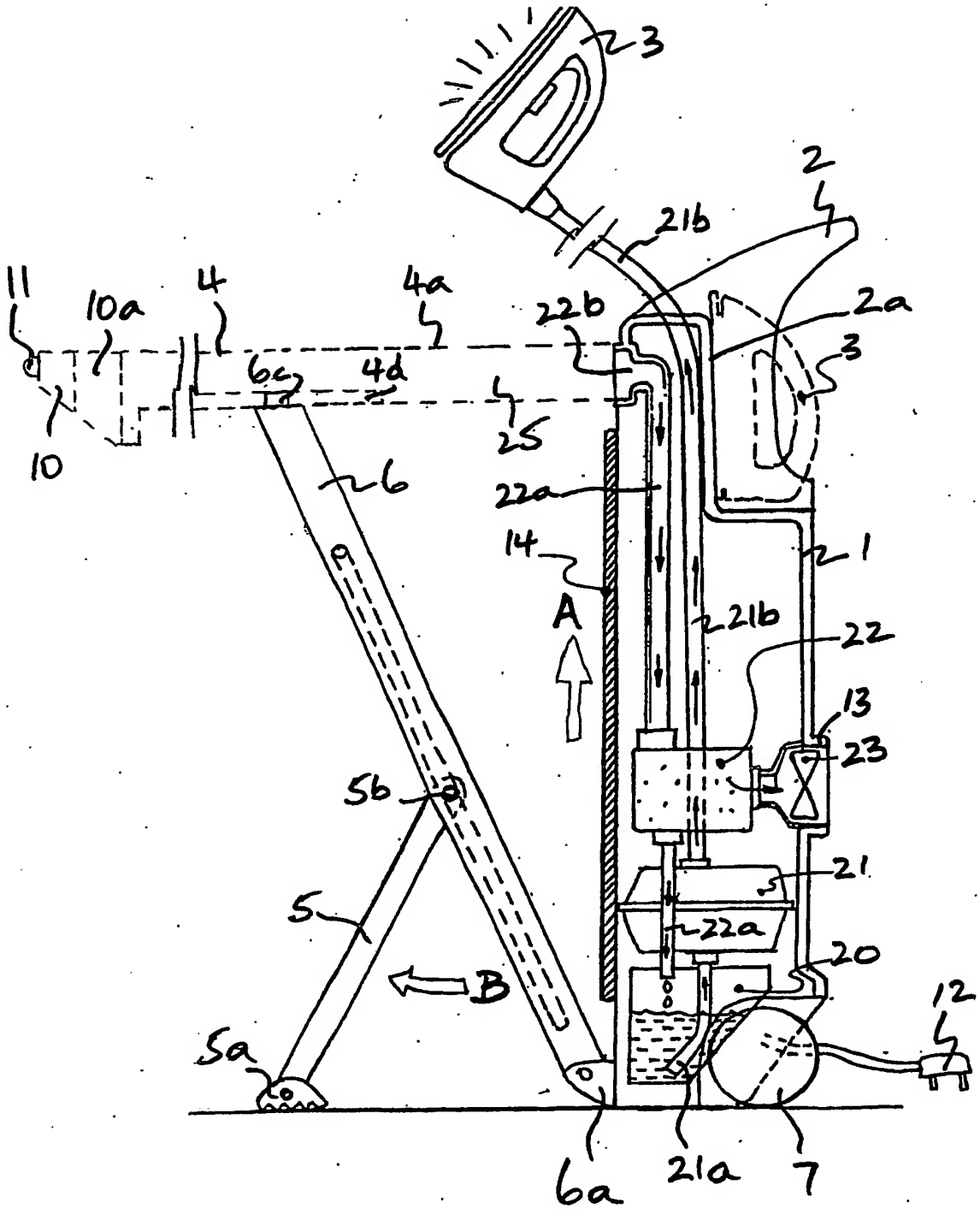


FIG4

FIG 5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